



**Keith T. Chan, B.S.**  
Department of Justice  
Drug Enforcement Administration  
Office of Forensic Sciences

**Senior Forensic Chemist**  
**Western Laboratory**  
**Pleasanton, CA**

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## AREA OF EXPERTISE

### Forensic Discipline

**Controlled substance identification, clandestine laboratory investigation and analyses**

### Expert Testimony

- Testified over 40 times and qualified, approximately 15 times, as Federal, state and county expert witness in areas involving the analysis and identification of controlled substances, and clandestine laboratory syntheses

## PROFESSIONAL EXPERIENCE

### DRUG ENFORCEMENT ADMINISTRATION

*Senior Forensic Chemist, Western Laboratory (Pleasanton, CA), March 1996-present*

- Analyze materials suspected to contain controlled substances for Federal, state and local investigation and prosecution
- Conducted analyses on approximately 7,000 exhibits
- Testify in Federal, state, local and international courts to results of analytical testing and clandestine laboratory synthetic manufacturing methods and yields
- Assist and advise law enforcement in the investigation, seizure, analyses and prosecution of suspected clandestine drug laboratories
- Provide drug chemistry, drug recognition and drug synthesis training to Federal, state, local and international law enforcement, chemists and prosecutors
- Troubleshoot and perform routine maintenance on analytical instrumentation

### *Training*

- Drug Enforcement Administration (DEA) Basic Forensic Chemist School, (Leesburg, VA) 1996
- DEA State and Local Clandestine Laboratory Safety Training, (Kansas City, MO) 1996
- DEA Clandestine Phenethylamine Laboratory Syntheses and Analyses Training, (San Francisco, CA) 1997
- Hewlett-Packard (HP) Techniques of Gas Chromatography, (Naperville, IL) 1997
- Nicolet Spectroscopic Solutions, (Foster City, CA) 1997
- HP Interpretation of Mass Spectra (MS), (Las Vegas, NV) 1997
- Beckman Capillary Electrophoresis (CE) Introduction, Troubleshooting and Software, (Palo Alto, CA) 1998
- HP High-Performance Liquid Chromatography (HPLC, 3D) ChemStation Operation, (Atlanta, GA) 1999
- Agilent, Liquid Chromatography/ Mass-Spectral Detector (LC/MSD) Techniques and Software Operation, (Pomona, CA) 2000
- DEA Instructor Development Course #10, (Quantico, VA) 2000
- Agilent CE Introduction and Applications, (San Francisco, CA) 2002

- Agilent Advanced Applications for the LC/MSD, (Raleigh, NC) 2002
- Agilent LC/MSD Seminar, (Oakland, CA) 2003
- Bowdoin College, Infrared (IR) Spectroscopy I: Interpretation of IR/ RAMAN Spectra, (Brunswick, ME) 2003
- DEA Basic Principles and Applications for CE Analysis of Seized Drugs, (Chantilly, VA) 2003
- LC Resources Advanced HPLC Method Development, (San Mateo, CA) 2005
- LC Resources Practical HPLC Troubleshooting, (San Mateo, CA) 2005
- DEA Nuclear Magnetic Resonance (NMR) Training I, (San Francisco, CA) 2006
- rMS Workshops, LLC, MS Interpretation, (San Francisco, CA) 2006
- DEA NMR Training II, (San Francisco, CA) 2007
- CE Technologies Practical CE, (San Francisco, CA) 2007
- Beckman-Coulter Comprehensive CE, (Jersey City, NJ) 2008
- DEA LC/MSD and Desorption Electrospray Ionization-MS Training, (San Francisco, CA) 2008
- DEA Uncertainty of Measurement Training, (San Francisco, CA) 2009
- Waters Corporation Ultra Performance Liquid Chromatography (UPLC): Essentials of the Quick Start Interface, (San Francisco, CA) 2010
- Jason Nawyn, Synthetic Cannabinoid/ Substituted Cathinones, (San Francisco, CA) 2011
- DEA NMR Training III, (San Francisco, CA) 2012
- DEA Level A High Hazard Environments Certification, (Valencia, CA) 2012
- DEA Criminal Discovery Legal Refresher, (San Francisco, CA) 2013
- Oklahoma State University Weapons of Mass Destruction Laboratory Recognition for Forensics Scientists, online, 2014
- Dean Kirby, Field Report: The Manufacture of Cannabis Concentrates, (Pleasanton, CA) 2015
- Advanced Clandestine Laboratory Site Safety, (Quantico, VA) 2015

*Student Intern, Western Laboratory (San Francisco, CA), 1992-1993*

- Analyze materials suspected to contain controlled substances for Federal, state and local investigations
- Conducted analyses on approximately 65 exhibits
- Assist chemists in the sampling and analysis of drug exhibits
- Assist chemist with the maintenance and troubleshooting of analytical instrumentation

*Training*

- Drug Enforcement Administration (DEA) Basic Forensic Chemist School, (San Francisco) 1992
- DEA Clandestine Phenethylamine Laboratory Synthesis and Analyses Training, (San Francisco, CA) 1992
- Joe Coles, Forensic Microscopy, (San Francisco) 1993

**Vector Laboratories, Inc.**

*Chemist, Production Department, Burlingame, CA, 1994-1996*

- Isolate and purify antibodies and plant lectins
- Synthesize enzyme, biotin, fluorescent and agarose conjugates of antibodies and lectins

- Perform quality control checks of antibodies, lectins and conjugates

## **EDUCATION AND CERTIFICATIONS**

University of California (Berkeley, CA)

- Bachelor of Science, Chemistry, 1993

## **PROFESSIONAL AFFILIATIONS**

- Clandestine Laboratory Investigating Chemists Association (CLIC), Member, 1997-present
- Northwest Association of Forensic Scientists (NWAFS), Member, 1997-present
- American Chemical Society (ACS), Member, 1994-present

## **PRESENTATIONS AND LECTURES**

- Instructor, Drug Recognition and Field Testing
  - Pacific Rim Seminar, War on Ice, Guam, 1998 and 1999
  - Various Federal, state and other local law enforcement trainings, approximately 20 classes, 1996 - present
- Instructor, Clandestine Laboratory Syntheses, Analyses and Safety
  - DEA State and Local Law Enforcement Certification, Quantico, VA and other locations, approximately 7 classes, 1996-present
  - Clandestine Laboratory Recertification, various locations, approximately 7 classes, 1996-present
  - Various Federal, state and other local law enforcement trainings, approximately 5 classes, 1996-present
- Instructor, Level A High Hazard Environments
  - DEA State and Local Certification, (Valencia, CA) 2016
  - DEA, State and Local Law Enforcement Recertification, (Pleasanton, CA) 2017
- Presenter, "A Case Study: The Recent Seizure of a P-2-P/ Methamphetamine Laboratory With an Interesting Route to P-2-P"
  - 12th annual CLIC Training and Technical Seminar, (New Orleans, LA) 2002

## **PUBLICATIONS**

- "LSD Extraction from 'Blotter' Paper", Microgram, Volume XXVIII, No. 3, March 1995, pp. 85-90.